

## REMARKS

Claims 2 and 4 - 8 are pending in the application. Applicants amend claims 2 and 4. No new matter is introduced. Support for the claim amendments may be found, for example, at page 6, line 12 through page 8, line 6 of Applicants' specification.

## ALLOWED CLAIMS

Applicants thank the Examiner for indicating that claims 5 - 8 are currently allowed.

## REJECTION UNDER 35 U.S.C. § 103

Claims 2 and 4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,893,024 to Sanders et al. Applicants amend claims 2 and 4 to clarify the nature of their invention, and respectfully traverse the rejection.

Sanders discloses a method and apparatus for reducing ingress noise in a cable communication system. Cable access unit 106 of Sanders includes first and second separation filters 220, 216, gate switch 212 and detection controller 206, 208, 210, 211 for selectively turning on gate switch 212 when it is judged that subscriber device 102 is transmitting an upstream signal (see, e.g., FIG. 2 of Sanders). The detection controller of Sanders makes this judgment by analyzing the duration and interval between pulses transmitted as a preamble to the upstream signal (see, e.g., column 4, lines 6 – 10 and FIG. 3 of Sanders).

With reference to amended claims 2 and 4, Applicants' disclosed ingress noise control system and device also relies on detecting a preamble transmission as a first step in judging whether or not an upstream signal is present. However, in addition, Applicants' claimed system includes a spectrum detector which obtains a spectrum of the upstream signal synchronously detected by the synchronous detection controller and which judges whether or not the upstream signal is a valid upstream signal, based on a comparison of the upstream signal level for each of a plurality of distinct predetermined frequencies when the upstream signal is synchronously

detected by the synchronous detection controller. If as a result of this comparison it is judged that the spectral level for each of the plurality of predetermined frequencies is nearly equal, the detected signal is presumed to be noise, and the gate switch for passing or not passing an upstream signal remains closed.

A comparison of Applicants' claimed device to the apparatus of Sanders can be made with reference to Applicants' FIGs. 2, 3. Sanders discloses only detecting the wave shape of an upstream signal (a pulse shape) in a time domain, and analyzing the duration of pulses and intervals between pulses as compared to reference data stored in a memory. This functionality is included in the functionality of synchronous detection controller 6 as shown in FIG. 2.

By way of contrast, Applicants' claimed invention further includes spectrum detector 16 in combination with synchronous detection judging unit 15 of FIG. 3, which further detect a frequency spectrum of an upstream signal within a frequency domain, and compare spectral levels for each of the plurality of distinct predetermined frequencies of the upstream signal to determine whether the upstream signal is a valid signal. Sanders fails to disclose or suggest additionally performing such a spectral analysis to determine whether an upstream signal is valid, or instead represents noise.

Accordingly, Applicants respectfully submit that amended claims 2 and 4 are not made obvious by Sanders, and are in condition for allowance.

## CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 2, 4, and 5 - 8, consisting of independent claims 2, 4, and 5 - 7 and dependent claim 8, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested

to telephone the undersigned attorney at the number listed below prior to issuing a further  
Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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